

### Claims

- 1 1. A method to enhance integrated circuit device heat dissipation comprising the  
2 steps of:  
3 providing an integrated circuit device having a surface;  
4 providing a flexible strip of a thermal conductive material; and  
5 adhering the strip to the surface of the integrated circuit device.
- 1 2. The method of claim 1 wherein the strip is corrugated.
- 1 3. The method of claim 2 wherein the strip is metal and is copper or aluminum.
- 1 4. The method of claim 3 wherein the thickness of the strip is 0.5 mil to 10 mil.
- 1 5. The method of claim 4 wherein the corrugated strip has corrugations in the  
2 shape of a repeating series of triangles.
- 1 6. The method of claim 4 wherein the corrugations in the strip are in the shape of  
2 a repeating series of convex and concave portions comprising sidewall portions, top  
3 portions and bottom portions.
- 1 7. The method of claim 4 wherein the corrugations in the strip are in the shape of  
2 a repeating series of convex portions comprising angled sidewalls and a top portion  
3 and a triangular concave portion.
- 1 8. The method of claim 4 wherein the corrugations in the strip are in the shape of  
2 a series of vertical fins.

1 9. The method of claim 4 wherein the corrugating in the strip are in the shape of  
2 a repeating series of loops.

1 10. The method of claim 1 wherein the flexible corrugated strips have an adhesive  
2 thereon to adhere the corrugated strip to the integrated circuit device.

1 11. The method of claim 2 wherein the flexible corrugated strip has a flat flexible  
2 strip of a thermal conductive material bonded to one side thereto forming a single-  
3 faced flexible corrugated strip article.

1 12. The method of claim 11 wherein the flat flexible strip article has an adhesive  
2 thereon on the side to be adhered to an integrated circuit device.

1 13. The method of claim 11 wherein the single-faced flexible corrugated strip  
2 article has a flat flexible strip of thermal conductive material bonded to the other side  
3 of the flexible corrugated strip forming a double-faced flexible corrugated strip.

1 14. The method of claim 13 wherein at least one of the flat flexible strips has an  
2 adhesive on the side to be adhered to the integrated circuit device.

1 15. The method of claim 14 wherein each side of the flat flexible strips has an  
2 adhesive thereon for adhering to an integrated circuit device.

1 16. A method to enhance integrated circuit device heat dissipation comprising the  
2 steps of:  
3 providing an integrated circuit device having a surface;  
4 providing a strip of flexible flat thermal conductive material;  
5 forming corrugations in the flexible thermal conductive material; and

6        adhering the corrugated flexible thermal conductive material to the surface of an  
7        integrated circuit device.

1        17.    The method of claim 16 wherein an adhesive is applied to the strip surface  
2        before corrugation.

1        18.    The method of claim 16 wherein an adhesive is applied to a strip surface after  
2        corrugation.

1        19.    The method of claim 16 wherein a flexible strip thermal conductive material is  
2        bonded to the corrugated flexible thermal conductive material forming a single-faced  
3        corrugated strip article.

1        20.    The method of claim 19 wherein an adhesive is applied to the side of a single-  
2        faced corrugated strip to be adhered to an integrated circuit device.

1        21.    The method of claim 19 wherein a second flexible strip thermal conductive  
2        material is bonded to the other side of the corrugated flexible thermal conductive  
3        material forming a double-faced corrugated strip article.

1        22.    The method of claim 21 wherein an adhesive is applied to the side of the  
2        double-faced corrugated strip to be adhered to an integrated circuit device.

1        23.    The method of claim 22 wherein an adhesive is applied to each side of the  
2        double-faced corrugated tape article.

1        24.    An article of manufacture for dissipating heat for integrated circuit devices  
2        comprising a flexible strip of thermal conductive material having an adhesive on a

3 portion thereof which will contact with and adhere the strip to an integrated circuit  
4 device.

1 25. The article of claim 24 wherein the flexible strip is corrugated.

1 26. The article of claim 25 wherein the flexible corrugated strip has a flat flexible  
2 strip of thermal conductive material bonded to the strip forming a single-faced flexible  
3 corrugated strip article.

1 27. The article of claim 26 wherein the flat strip of thermal conductive material  
2 has an adhesive on the side to be adhered to an integrated circuit device.

1 28. The article of claim 26 wherein a second flat flexible strip of thermal  
2 conductive material is bonded to the other side of the corrugated tape to form a  
3 double-faced flexible corrugated strip.

1 29. The article of claim 28 wherein each side of the flat flexible strip of thermal  
2 conductive material has an adhesive thereon.

1 30. The article of claim 24 which has been surface treated to increase the  
2 emissivity of the article.

1 31. The article of claim 25 which has been surface treated to increase the  
2 emissivity of the article.

1 32. An electronic component assembly comprising a housing containing an  
2 electronic component which is cooled by adhering the flexible article of claim 24 to  
3 the electronic component and the housing.

1 33. The electronic component assembly of claim 32 wherein the housing is metal  
2 or has a thin metal coating thereon.

1 34. The electronic component assembly of claim 32 wherein the flexible article  
2 used is the article of claim 25.

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